

the alterations that would make the regulations generally acceptable to the miner and at the same time be reasonable in the interest of the Government. Since the publication of the article referred to, Mr. Burgess, Deputy Minister of the Interior, on the 3rd instant, left Ottawa for Winnipeg, and being most anxious that all dissatisfaction among the miners of the North-West should be speedily dispelled, he proceeded on the 16th inst. to Calgary, where he is now in conference with the leading practical mining men, with whom he will engage in an exhaustive discussion of the various points at issue, and there exists no doubt that Mr. Burgess, who is invariably disposed to act impartially, will agree to any feasible and advisable alterations in the regulations that will have a tendency to encourage the prospectors and miners and to advance the mining industries of the North-West, which promise to become of so great importance in the country.

In the Rocky Mountain district mining matters are rather quiet, pending the return of the army of prospectors who are at present exploring the Purcell and Selkirk ranges. The latter range is considered to be the richer in mineral, probably because it has been more explored, and years ago a considerable amount of mining was carried on there, but, on account of the great distance from other mining centres, it was abandoned, as less than "ounce diggings" did not pay. The western slope of the Rockies is the objective point for the majority of prospectors who have flocked from British Columbia and from the East in hundreds since the opening of spring; nevertheless a fair force of miners and prospectors will operate on the eastern side in the foot hills.

In the September, 1883, number of the REVIEW we published the opinion of Mr. J. S. Phillips, Mining Engineer and Metallurgist, of New York, respecting the mineral wealth of

our north western country. Among other important remarks made by Mr. Phillips he gave expression to the following:

"The trans-continental railway of Canada will enter into and cut its way across—or in a mining manner, coast—the whole mountainous portions of the country, and will soon enter the wide and most interesting mineral zones of the Rocky and Wasatch mountains, where intelligent observations and explorations will, in my opinion, cause Old England to be once more proud of Colonial wealth.

"This field for mining, with mountains running over 1,000 miles northerly, the whole breadth of the Canadas, will probably extend across the longitudes of Western Dakota, Montana and Idaho, of the United States of America, but for lode or vein mining will not reach so far west as Cariboo in British Columbia, as the Sierra Nevada chain of mountains is thereabout broken and detached for a few hundred latitudinal miles. This does not prevent the possibility of auriferous discoveries in gravel formations, which are very likely to be found in many valleys that have received the water washed debris from the western declivity of the previously named mountains along the route. I have been frequently questioned by letters from England: Where is the best place to explore for minerals? and I answered both Englishmen and Canadians—Prospect the breadth of the Canadas on either side of the advancing railway, but more particularly opposite to Western Dakota, Montana and Idaho, for vein mining, and thence westward for gravel and placer gold, where vast mineral areas lie unexplored.

"When this railway is sufficiently far advanced, the north and south branches of the Saskatchewan River, the Arthabaska, and Peace Rivers, and the Rivers Liard, Peel, and McKenzie, will be found also convenient for both prospection and power for mining this 1,000 miles long of the east slope of the Rocky Mountains, whilst the five branches for mining the head waters of the great Yukon River may be utilized for the north-western slope with its spurs and parallel range. A few brave and strong men may make immense fortunes along this range of mineral-bearing strata. I know of no other unexplored belt in North America that ex-

poses superior inducements, and there is probably nothing on this continent but the unexplored eastern slope of the mighty Andes, which extends 4,000 miles from north to south through the several rich countries of Columbia, Ecuador, Peru, Bolivia, the Argentine Republic, and Patagonia; but Canada has the great advantages of your own language, laws, and flag; whilst these are mostly inaccessible, and more particularly so to foreigners."

CANADA'S PHOSPHATE TRADE.

The reports that have reached us from the mines during the month are of a most satisfactory nature, and the managers of the different properties predict a very large output for the year. Besides the more extensive mines in operation many smaller ones have been opened since the snow left the mountains and new ground is being broken daily throughout Ottawa County, revealing the fact that the Townships of Buckingham, East and West Portland, Derry and Bowman are likely, for the future, to be the chief phosphate producing localities. Some of the mines in Templeton and Wakefield, whose reputations have already been established, will, in all probability, continue productive for years to come; notably, those owned by Messrs. McLaurin & Blackburn, J. A. Gemmill and M. Haldane & Sons. The industry has been placed on a more permanent basis than formerly, and proper attention is now being directed to practical mining and to shipping the output of the mines in as pure a state as possible, by separating the mineral from foreign matrix so far as it can be done by hand manipulation. Some of the large producers contemplate the erection of suitable machinery that will supersede hand cobbing and bring the output of their mines up to a high state of purity at a much reduced cost.

It was expected by some that the reduced value of raw phosphate rock that ruled in the English market at the beginning of the year would have had a tendency to discourage the miners, but such has not been the case, and the mines have been as actively worked during the past six months as at any time since this industry was started in the country. Those who availed themselves of the low rates of freight from Montreal at the opening of navigation were en-

abled thus to realize almost as good a price for their shipments as was obtained last year. Assuming that the present price of phosphate in England and on the continent of Europe should not vary, and that freights should continue to rule at the average for the past five years, it would be difficult to point out any industry or mining venture that will return a handsomer profit than phosphate mining when directed by good management and economy. According to the present English quotations for Canadian apatite, 80 per cent. mineral is worth, say at Buckingham Station, eighteen dollars per ton, and the average cost of mining and delivery at this point, from all the mines in the Rivière du Lievre district of the County of Ottawa does not exceed ten dollars per ton; thus returning to the miner the very handsome profit of \$8 per ton, equivalent to 80 per cent. on his outlay. The experience of the past few years has proved these figures to be practically correct, and the owners of mines are thus enabled at the close of each day's work to estimate to a nicety the result of their operations.

THE MINES.

High Rock Mine.—Since the arrival of Mr. Pickford, President of the Company that owns this valuable property, from England, last month, important changes have been made at the mine, and an entirely new management organized; steam-drills, hoists, etc., have been introduced, and it is thought that a larger quantity of phosphate will henceforth be raised, and at a reduced cost. Some extensive deposits have been discovered on the property during Mr. Pickford's visit and are being opened up. Under the new organization Mr. P. H. Smith controls the Mining Department, and Mr. S. Hicks has the general superintendence of transportation from the mine to Buckingham Railway Station, from which point the output of the mine is consigned to Messrs. Wilson and Green, of Montreal, the appointed general managers and agents.

Star Hill Mine.—Mr. W. H. Williams, of New York, President of the Union Phosphate Company, recently returned from the company's property and reported everything going ahead to his entire satisfaction. This company began work about a year ago, and up to the present time the operations have been confined to a very limited space, within an area of about two acres, from which upwards of 3,500 tons of excellent phosphate have been raised and the deposits are becoming more productive. The Union Company owns 1,300 acres of